IN THE CLAIMS:

1 - 3. (Canceled)

4. (Currently Amended) A method of producing metallic and intermetallic alloy ingots of high homogeneity and low porosity of any adjustable diameter ~~according to claim 1~~, the method comprising the ~~following method~~ steps of:

(i) producing electrodes by customarily mixing and compressing [[the]] selected starting materials;

(ii) at least once remelting the electrodes obtained in step (i) in a conventional fusion-metallurgical process;

(iii) inductively melting off the electrodes obtained in steps (i) and (ii) in a high frequency coil;

(iv) homogenizing the pre-homogenized, molten material obtained in step (iii) by supplying said molten material continuously or quasi-continuously into [[in]] a cold wall induction crucible; and

(v) withdrawing the melt, solidified by cooling, by continuous or quasi-continuous billet withdrawal from the cold wall induction crucible of step (iv) in the form of solidified ingots of freely adjustable diameters and lengths.

5. (Currently Amended) A method ~~according to claim 1~~ of producing metallic and intermetallic alloy ingots of high homogeneity and low porosity of any adjustable diameter, the

method comprising the ~~following method~~ steps of:

(i) producing electrodes by conventionally mixing and compressing [[the]] selected starting materials;

(ii) at least once melting the electrodes obtained in step (i) by a conventional fusion-metallurgical method;

(iii) producing a pre-homogenized, molten material of the electrode material obtained in step (ii) by melting off in a cold crucible plasma furnace;

(iv) homogenizing the pre-homogenized, molten material obtained in step (iii) by supplying said molten material continuously or quasi-continuously into [[in]] a cold wall induction crucible; and

(v) withdrawing the melt, solidified by cooling, by continuous or quasi-continuous billet withdrawal from the cold wall induction crucible of step (iv) in the form of cylindrical ingots of freely adjustable diameters and lengths.

6 - 9. (Canceled)

10. (Previously Presented) A method according to claim 4, wherein homogenization in the cold wall induction crucible in step (iv) takes place at a temperature of 1400 to 1700°C.

11. (Previously Presented) A method according to claim 4, wherein homogenization in the cold wall induction crucible in step (iv) takes place in a range of frequency of 4 to

20 kHz.

12. (Previously Presented) A method according to claim 4, wherein cooling the melt upon ingot withdrawal in step (v) takes place by the aid of water-cooled copper segments.

13. (Previously Presented) A method according to claim 4, wherein the diameter of the ingots withdrawn in step (v) is in the range of 40 to 350 mm.

14. (Currently Amended) A method according to claim 4, wherein said cylindrical ingots are γ-TiAl-based alloy ingots ~~produced according to claim 1,~~ comprising:

(a) a length to diameter ratio of > 12;

(b) homogeneity related to local macroscopic fluctuations of the aluminum and titanium of maximally ± 0.5 atomic percent; further metallic alloying constituents of maximally ±0.2 atomic percent; non-metallic alloying additions (boron, carbon, silicon) of maximally ± 0.05 atomic percent.

15. (Previously Presented) A method according to claim 5, wherein the electrodes (iii) used for producing the molten, pre-homogenized material by means of an induction coil rotate preferably at a speed between 2 and 5 rpm.

16. (Previously Presented) A method according to claim 5, wherein homogenization

in the cold wall induction crucible in step (iv) takes place at a temperature of 1400 to 1700°C.

17. (Previously Presented) A method according to claim 5, wherein homogenization in the cold wall induction crucible in step (iv) takes place in a range of frequency of 4 to 20 kHz.

18. (Previously Presented) A method according to claim 5, wherein cooling the melt upon ingot withdrawal in step (v) takes place by the aid of water-cooled copper segments.

19. (Previously Presented) A method according to claim 5, wherein the diameter of the ingots withdrawn in step (v) is in the range of 40 to 350 mm.

20. (New) A method of producing metallic and intermetallic alloy ingots of high homogeneity and low porosity of any adjustable diameter, the method comprising the steps of:

(i) mixing and compressing a plurality of selected starting materials to form electrodes;

(ii) remelting the electrodes obtained in step (i) in a fusion-metallurgical process;

(iii) inductively melting off the electrodes obtained in step (ii) in a high frequency coil to form a pre-homogenized molten material;

(iv) homogenizing said pre-homogenized molten material obtained in step (iii) by supplying said pre-homogenized molten material into a cold wall induction crucible; and

(v) withdrawing the melt, solidified by cooling, by billet withdrawal from the cold wall induction crucible of step (iv) in the form of solidified ingots.

21. (New) A method according to claim 20, wherein homogenization in the cold wall induction crucible in step (iv) takes place at a temperature of 1400 to 1700°C.

22. (New) A method according to claim 20, wherein homogenization in the cold wall induction crucible in step (iv) takes place in a range of frequency of 4 to 20 kHz.

23. (New) A method according to claim 20, wherein cooling the melt upon ingot withdrawal in step (v) takes place by the aid of water-cooled copper segments.

24. (New) A method according to claim 20, wherein the diameter of the ingots withdrawn in step (v) is in the range of 40 to 350 mm.

25. (New) A method according to claim 4, wherein said cylindrical ingots are γ-TiAl-based alloy ingots comprising:

(a) a length to diameter ratio of > 12;

(b) homogeneity related to local macroscopic fluctuations of the aluminum and titanium of maximally ± 0.5 atomic percent; further metallic alloying constituents of maximally ±0.2 atomic percent; non-metallic alloying additions (boron, carbon, silicon) of maximally

$\pm$ 0.05 atomic percent.